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Deep cultures of disaster: The significance of
the anthropological perspective for understanding
the interstices of hazards and disaster

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The Significance of the Deep Cultural Perspective for Understanding Tempestuous Tales of Power and Compounded, Cascading Storms of Disaster

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This paper examines the impacts of and responses to prolonged power outages resulting from periods of extreme weather within four case study sites in Scotland and England, UK. Drawing on ethnographic evidence obtained over a two-year period, the paper explores how increasing severity and frequency of extreme weather, inadequate infrastructure provision, increasingly limited emergency support, and problematic community-based preparedness and planning initiatives, came together to result in compounded, cascading forms of crises. I argue that these storm-related power outages, as an example of a compounded crisis, not only challenge mainstream conceptualizations of environmental disasters as singular 'events' that take place along a linear continuum with clearly defined stages and which continue to dominate existing Disaster Risk Reduction research, but reveal how inadequate official response procedures risk enhancing suffering and generating new and intensified risks that can snowball into compounded and cascading forms of crises. In addition, the paper shows how examination of compounded disasters using the anthropological 'deep cultural' perspective and ethnographic method can help to reveal important insights into how unequal power relations produce both social and ecological vulnerability to weather-related disasters, hinder effective response, and impede the development of effective hazard prevention and disaster risk reduction strategies. Analyzing the significance of the findings from this research undertaken as part of a larger transdisciplinary research project that sought to improve responses to power outages during extreme weather, I explore how the deep cultural perspective allowed underlying, hidden power dynamics and inequalities of impacts at the local level to be made visible in ways that could not be ascertained from the originally proposed research design and methodology. From this, I argue that only by exposing, acknowledging and addressing the uneven impacts and responses to cascading crises, as well as the unequal power dynamics that generate the conditions of compounded disasters, can developments in disaster prevention and disaster risk reduction prevent the escalation of the unequal and unjust distribution of risk and suffering in an era of climate change.

Negotiating "Normality" in the Aftermath of the "Brumadinho Dam Disaster" (Minas Gerais, Brazil)

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On January 25, 2019, the tailings dam of an iron ore mine near the city of Brumadinho, located in the Brazilian State of Minas Gerais, collapsed. The released wave of toxic mud not only killed 272 community members and devastated the surrounding environment but has also contaminated one of the major river systems in Latin America. Apart from provoking an international outcry, the case has likewise reinforced regional endeavors to publicly denounce the historical, socio-economical, and -political fault lines of what local people call a "predatory system". Such affective-political responses, however, not only include protests organized by social movements building upon a historical embeddedness in Brazilian society; they also entail smaller, seemingly mundane negotiations of what "normality" means in a socio-cultural context notoriously characterized by multiple crises formations. This even more as *"[t]he logic of 'like it used to be' and 'already normal again' indeed reveals how the post-disaster everyday is at once normal and never the same"* (Samuels 2019: 4).

Retracing the reflection of this paradoxical (re)arrangement of "normality" in the ambivalence(s) of life and death, this contribution sets out to anthropologically scrutinize the relation between the material and the political. In doing so, it enquires into the affective moments of reconfiguring the social world and everyday life in the aftermath of disastrous events (e.g., Das et al. 2001) – which necessarily implies critically engaging with those aspects neglected by a merely natural scientific, technical approach towards post-disaster management (e.g., Barrios 2017; Valencio 2014). The paper thus addresses the question of how "normality" is politically and affectively negotiated, not despite being confronted with destruction, suffering, and death, but precisely out of experiences of devastation and loss (e.g., Carter 2018).

References

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Culture and Disaster Risk Assessment and Risk Reduction – Where is the Built Environment?

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Culture shapes knowledge, policy, and practice for risk assessment and disaster risk reduction to atmospheric, hydrologic and geologic hazardous events. But does culture come to the fore in understanding the vulnerability of the built environment – social (including housing) and economic infrastructure – including the very creation of the vulnerability of the built environment components which is a harbinger of the human vulnerability?

The built environment is a stark yet often unrecognized or methodologically invisible component when discussing acceptable risk and risk reduction outside of technical, engineering and scientific forums. Culture is the medium through which the built environment comes about. Culture explains which powers come to bear in the depths of "disasters by design" (Mileti 1999), but also risk by design (Bender forthcoming). Understanding that other risks take precedent over the threat of natural hazard events on populations and/or their built environments is culture in its most discerning and anthropological sense.

As exemplified by the Sendai Framework for Action, national declarations and globalization strategies - most often in the name of economic development – are moving forward to integrate their chosen policies and practices through multi-disciplinary approaches. Beyond reluctance, there is avoidance to assess the cultural context of how risk of the built environment comes about, by whom, at whose expense, whose benefit and with what resulting inequalities. Among the many engaged in the risk management enterprise, disciplinary dominance as well as scale of analysis and application for acceptable risk taking and risk reduction policies and practices are not well recognized and understood.

In an attempt to address these themes, the following emerging issues, particularly in the context of multi-disciplinary research projects, will be discussed. First, how do risk assessments of the built environment – what is already built, what is to be built in the name of development and what is built in disaster recovery – come about? Second, who actually assesses risk and on whose behalf (building codes, landuse zoning, and insurance risk pools as examples of many assessments through legislative, executive and judicial actions). Third, in dealing with risk, what can be overriding risks taking precedent in decision making over the threat of impact of natural hazard events on populations and/or their built environments? And fourth, how should the role of the vulnerability of social and economic infrastructure to natural hazard events be understood in the social, economic and other described vulnerabilities of persons and populations?

Not all disaster experiences are created equal: Expanding "recovery" practices to reflect the lived realities of those impacted by disaster

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On September 21, 2018 an EF3 tornado swept across the community of Dunrobin, Ontario destroying or severely damaging greater than 50 homes, and resulting in several injuries. The following spring, the community of Westmeath, Ontario experienced catastrophic flooding when the Ottawa River reached unimaginable heights; many people lost their homes and approximately 100 more could only access their properties by boat for as long as 6 weeks. When these differing hazard types become disastrous, one with a quick and sudden onset, the other characterized by a slower and more prolonged onset, vastly different disaster experiences unfold for people.

In this presentation I compare findings derived from qualitative analysis of semi-structured interview data collected from two ethnographic studies carried out in Dunrobin, Ontario (n=23) and Westmeath, Ontario (n= 26) following the tornado and flood disaster, respectively. My aim in doing so is fourfold. First, I will show that differing disaster experiences generate disaster recovery needs that are variable across disaster-type and across households. Second, through a description of disaster experiences, I will highlight the role that emotion plays in contributing to the multi-dimensionality and non-linearity of disaster recovery (Tierney and Oliver-Smith 2012). Third, by sharing aspects of the differing day-to-day experiences following these disasters, I aim to broaden Quarantelli's (1999) notion of recovery to include non-deliberate actions for those individuals and groups whose daily routines have been disrupted. And fourth, I plan to draw on these findings to offer possibilities for disaster recovery practice and policy that extend beyond the traditional strategies that typically rely upon short term financial aid or relief, and/or individuals' enacting policy options to recover from insurable and non-insurable property losses.

In all, this presentation aims to elevate the lived realities of residents in two Ontario Canada communities affected differently by different hazards turned disastrous. By bringing greater focus and clarity to the diversity of experiences across Dunrobin and Westmeath, we become better poised to create more effective disaster risk management linkages, those grounded in empirical evidence, between community members and disaster practitioners, as well as raise the value of implementing an anthropological approach for addressing disaster recovery more generally.

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Be (under-)prepared: Responding to Covid-19

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This paper unveils how cultural disaster memory can affect preparedness and resilience in regard to a pandemic, in this case COVID-19. Since its initial spread and subsequent declaration as a global public health emergency by the WHO, the COVID-19 pandemic has made apparent the need for an adequate understanding of socioanthroplogical factors such as cultural risk perception in order to improve risk communication during the unfolding of such hazardous events. However, the impact of (popular) culture on the reception of COVID-19 has so far been overlooked, which is why this paper makes a case for the integration of a cultural studies viewpoint into COVID-19 risk research. Our hypothesis was that cultural images deriving from previous disaster experience, as well as from disaster coverage consumed through fictional accounts, have an impact on the response to any future pandemic, and that the impact of these images has been underestimated.

Fictions from Edgar Allan Poe's "The Masque of the Red Death" on have set standards for pandemics as disastrous events on a scale that the real diseases fail to meet. As a result, news reporting is often not taken overly seriously, because the exaggerated expectations are not met.

A survey was distributed among members of the English department of the University of Freiburg (N=103), looking for possible relations between previous disaster experience (fictional, real, historical) and the response to COVID-19. Their experience with previous disastrous events, and media images, in relation to resilience and preparedness concerning the COVID-19 pandemic was evaluated using the PAS (positive appraisal style) score method by Kampa et al.. The results indicate that exposure to various types, and varying degrees of, disaster experience, can influence resilience, and consequently preparedness, in facing challenges like COVID-19.

Kampa, Miriam et al. *A Combined Behavioral and Neuroimaging Battery to Test Positive Appraisal Style Theory of Resilience in Longitudinal Studies.* Neuroscience, 2018. DOI: 10.1101/470435.

Rethinking Cultural/Social Resources as Disaster Adaptive Strategies toward Resilience: A Case from Sri Lanka

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The disaster prevention and mitigation technologies in developing countries are recognized to have positive impacts on reducing disaster risks; however, how can cultural and social resources which counter disasters that are inherent in the community, so-called disaster adaptation strategies, reduce disaster risks? This paper provides a qualitative analysis on this question through interviews and literature review, taking Sri Lanka as an example.

The high risk of flooding, cyclones, and landslides in Sri Lanka is attributed to the country's geographical location and vulnerability to flooding and landslides due to its developing social infrastructure and technologies. Although the country is vulnerable to flooding, the lack of government-led disaster countermeasures has led to an increasing trend of damage, resulting in poverty and human and material losses. Hence, local people are facing a challenge to take measures to reduce disaster risks by using local knowledge resources against disasters.

To grasp the actual situation and issues of the response and rehabilitation from the flood damage in Ratnapura district utilizing disaster adaptive strategy, the authors conducted interviews of the case of 2017 and a literature review of the case of 1913.

As for the reality of the response and reconstruction, in 2017, the response and reconstruction were done by utilizing religious, local, and kinship relations. While in 1913, the response and reconstruction were done by utilizing colonial buildings, actors, and traditional communities called "estate", which is unique to Sinhala society. The challenges of the response and recovery are, in 2017, the results were pointed out the timing of evacuation and the economic burden. In contrast, in 1913, the community survived on scarce material resources due to the colonial background.

Rather than trying to solve the problem of disaster risk reduction using only current technologies and systems, it is necessary to identify disaster adaptive strategies through the literature of the past, how the disaster prevention system worked in those days, and how it has changed over the years for creating resilient societies.

TOWARDS A RICHER UNDERSTANDING OF KOSI RIVER FLOODS IN BIHAR, INDIA: DEPLOYING ANTHROPOLOGICAL PERSPECTIVE

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Available literature suggests what we construe as disaster called flood is a design problem embedded in our developmentality with respect to natural resources like water (Mishra 1997; D'Souza 2006). Once water is treated as an externally existing neutral object, science and technology paves way for social engineering of nature (Lahiri-Dutt, 2020). Rochefort and Cobb explain how and why issues come to be defined in different ways, how these definitions are expressed in the world of politics, and what consequences these definitions have for government action and agenda-setting dynamics (Rochefort & Cobb, 1994). The paper utilizes the framework of "politics of disaster" in studying the case of Kosi river flood in Bihar, India. The moments of disasters though reveal the contradictions within social, economic and political functioning of a society, surprisingly it also becomes a moment to further entrench those institutions and perpetuate the development patterns that created the disaster in the first place (Barrios, 2017). The impact of the disaster in the society is dictated by its socio-cultural matrix viz. caste, class, gender, and age-group, further underlining the human element in the construction, experience and response to the disaster. Oliver Smith argues that vulnerability is socially constructed and perceived (Oliver-smith, 2009). Largely, the response of the state's disaster management apparatus to the Kosi river floods has been limited to strengthening of embankments before the onset of monsoon season and post-flood relief work. On the other hand, for generations, people have been 'living with floods' (Mishra 2001). The same flood waters of river Kosi don't impact everyone equally. In his work on forced settlements also, Oliver Smith explains that migration as an adaptation measure is possible for relatively resourceful sections. The weaker sections like women, children and lower castes are condemned to suffer more materially as well as psychologically (Pritchard & Thielemans, 2014). This paper argues in favour of studying Kosi Floods from an anthropological perspective and understand it as a humanly accentuated, socio-culturally negotiated and techno-politically attempted problem and critically discusses the limitations of modern scientific and technological solutionism. Using snowball sampling, in-depth interviews were conducted with a relevant officials and scholar-activists. Focused group discussions were also conducted with the flood-affected victims. The paper argues for an epistemic plurality, shedding the infallibility of technological determinism and appreciating a more open approach towards already existing knowledge systems of coping with disasters.

KEYWORDS: Floods, Kosi, Policy, Disaster

Chronicle of a foretold disaster. Climate change, glacier melting, and risk perception in the Alps

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The aim of this proposal is to describe the preliminary results of an ethnographical research conducted on the Mont Blanc region, concerning the impacts of climate change and glaciers melting on the Italian Alps, and the local communities responses.

Summer 2019 was the hottest ever recorded on earth. An awful heat wave swept across Europe and then settled over Greenland, where it triggered the melting of hundreds of billions of tons of ice. Likewise, on the Alps, the impacts have been severe: a massive glaciers' melting took place followed by a wide range of repercussions, like slope instability, rock falls and floods; phenomena that are playing an increasingly crucial role for the future of the inhabitants and the whole ecosystem. The Alpine region is characterized by a wide variety of biodiversity, habitats, and environments, in which human and wildlife species coexist, coping with extreme natural phenomena, due to specific weather conditions and local topography. Throughout this area there is widespread and multifaceted risk. We know its different forms and we know where they are likely to occur, but we don't know "when" these phenomena will appear, and "how" intense they will be; in fact they could appear simultaneously, amplifying the consequences the ones on the others, or they may appear in different moments or ages. What we can assume is that climatic changes make future scenarios less predictable, and therefore less manageable and more impactful.

Nowadays "climate change" and its related impacts has become a central issue for both natural and social sciences. In the anthropological field, the latest studies are focusing on how local and global communities respond to climatic changes (ORLOVE: 2019) and its related hazards, with particularly attention on land perception, memory, history (INGOLD 2018), on "preparedness" (REVET, LANGUMIER 2015) and on "risk cultures" (BOHOLM 2015, BENADUSI 2015, OLIVER-SMITH, HOFFMAN 2019). In the Mont Blanc area, even though the seriousness of the glaciers' melting, we are observing a disconnection between the gravity of this phenomenon and its local perception. Cultural framing can shape the ways in which places are perceived and, in fact, perception of mountain environment does not rest on physical visibility alone but is influenced by global and political discourses. That!s why the contribution of the ethno-anthropological studies can be a key to analyze the impacts of these processes on human societies, and become a key to better understand the ongoing environmental challenges.

The social (trans-)formation of risks in humanitarian project networks in South Sudan

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In recent years, the body of risk research on humanitarian assistance has grown considerably (e.g. Willitts-King and Harvey, 2005; Duffield, 2010; Arshad et al., 2013; Stoddard, Haver and Czwarno, 2016; Stoddard, Czwarno and Hamsik, 2019).However, most contributions apply a rather technical approach to risks in humanitarian action and focus especially on risk management.

This paper applies a more sociological perspective. It defines organizational risk as a negative form of social capital that is transferred between different actors involved in the implementation of humanitarian aid projects. This includes for example international NGOs, their implementing (national) partner organizations, local authorities, project management committees and project participants, as well as local suppliers, casual workers etc., who all need to work together to achieve the overall project objective(s). Doing so, they create a horizontal "humanitarian project network", linking different local, regional, and national cultures. Drawing on 9 months of field work in 3 school feeding projects in Greater Bar el-Ghazal in South Sudan, this paper shows how the horizontal transfer of risks between culturally diverse actors triggers the social (trans-)formation of the meaning and the perceived extent of organizational risks in humanitarian assistance. Thereby, it considers both the role of the individual actor in applying new/different local cultural understandings to the concept of risk, and the structure of the humanitarian project network as horizontally enabling or disabling these vertical (trans-)formation processes.

The paper is part of a PhD study and based on semi-structured key informant interviews, long-term participant observation and key document reviews. It generated its findings using qualitative social network analysis. Hence, it also advocates for the use of dedicated qualitative research designs to strengthen the sociological understanding of (organizational risks in) humanitarian action.

Reducing volcanic risk: who, how and for what? Anthropological approach to the perspectives of Mapuche communities in southern Chile

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A study is presented that delves into volcanic risk from a sociocultural perspective and a qualitative methodology, through the analysis of the perceptions of rural and indigenous inhabitants who live near two active volcanic systems in southern Chile. The objective is to understand how volcanic risk is perceived and how it can be reduced at local scales, based on the analysis of impacts, opportunities and gaps in partially geographically isolated rural territories, and to recognize elements that contribute to reduce disaster risk. The results show that in these rural territories, characterized by dynamics that include community relations, human-environmental interactions and economic practices linked to the volcanic environment, the presence of volcanoes becomes into an ambivalence of dangers and opportunities. Therefore, the populations that inhabit these spaces have volcanic risks incorporated in their livelihoods (Marín et al., 2020). Likewise, it is evident that people who live with volcanic risk, far from opting to abandon the mountain environment and their rural livelihoods, seek that the structures of opportunities and development processes reach their territories, already isolated in multiple dimensions. This trend has also been evidenced in other volcanic environments (e.g. Bachri et al., 2015). Based on this, the potential for local risk management (LRM) in the study area (so far absent) as a strategy based on a permanent process of forecasting not only volcanic hazards, but also the socio-environmental vulnerability of populations is discussed, understanding that the combination of these is the root cause of disaster risk. LRM would pay attention to the cultural frameworks from which dangerous and safe are distinguished. It would also address the dual nature of volcanoes (in terms of daily life-crisis, dangers-benefits, knowledge-uncertainties, etc.) and the duality of external (institutional, scientific) and community perspectives on volcanic risk. Within management, I suggest that the notion of resonance between different logics should be highlighted as an underlying factor, to promote preventive actions that recognize the local culture, promoting a sustainable and integrated DRR in the territorial dynamics of volcanic environments.

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Marín, A., Vergara-Pinto, F., Prado, F., Farías, C. (2020). Living near volcanoes: Scoping the gaps between the local community and volcanic experts in southern Chile. Journal of Volcanology and Geothermal Research, 398, 1-10.

Organisational narratives of past events and their implications for disaster preparation in civil protection and emergency management

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Meteorological forecasting for future weather events is crucial for preparatory practices of organisations involved in civil protection and emergency management, and its data accuracy is continuously improving. However, such technical advances only can have a positive impact on decision-making of meteorological laypersons if this information is understood by them and implemented in their existing practices (Kox et al. 2018). To assess the handling and understanding of weather information and the inherent uncertainties of forecasting the future, not only a psychological and social science perspective but especially an anthropological perspective is indispensable as it enables to gain further insights about how information is used and acted upon – especially in preparation for an event.

Organisational preparatory practices for weather events are informed by an array of aspects. One of them can be seen in the narration of past events as narrations are part of organisational structure and culture (Browning 1991). With a practice-based approach, this research aims to shed some light on how organisational narratives inform preparatory practices for future weather events in emergency management and shows the importance of collective experiences of emergency management personnel to their handling of threats. It is based on two case studies: fire brigades in Brandenburg, Germany and their management of wildfire danger, and the German road traffic sector in relation to weather warnings and road safety. The study is part of a wider interdisciplinary research project in collaboration with Germany's National Meteorological Service DWD.

The emphasis of this conference contribution lies on organisational culture of the aforementioned organisations and their narratives about past events, how those inform practices aimed at future events and hence, how risks towards severe weather events are interpreted. We will present first results of focus group discussions and semi-structured ethnographic interviews with representatives of actors involved in wildfire management as well as road safety. Findings show that organisational culture, imaginations of future risks and interpretation of extreme weather events – albeit in combination with technological forecasting tools – are relevant to practices in emergency management and should be taken in to consideration when we talk about disaster preparedness.

Browning, L. (1991). Organisational Narratives and Organisational Structure. Journal of Organizational Change Management, Vol. 4, No. 3, pp. 59-67.

Kox, T., Lüder, C. & Gerhold, L. (2018). Anticipation and Response: Emergency Services in Severe Weather Situations in Germany. Int J Disaster Risk Sci 9, pp. 116-128.